

# **Air Education and Training Command**

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*Develop America's Airmen Today ... for Tomorrow*

**Tricks of the Trade**

**How To Prepare For,**

**Survive And**

**Prosper**

**During AWC**



**U.S. AIR FORCE**

**DR. GRANT T.  
HAMMOND  
AWC/CSAT**

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*Integrity - Service - Excellence*



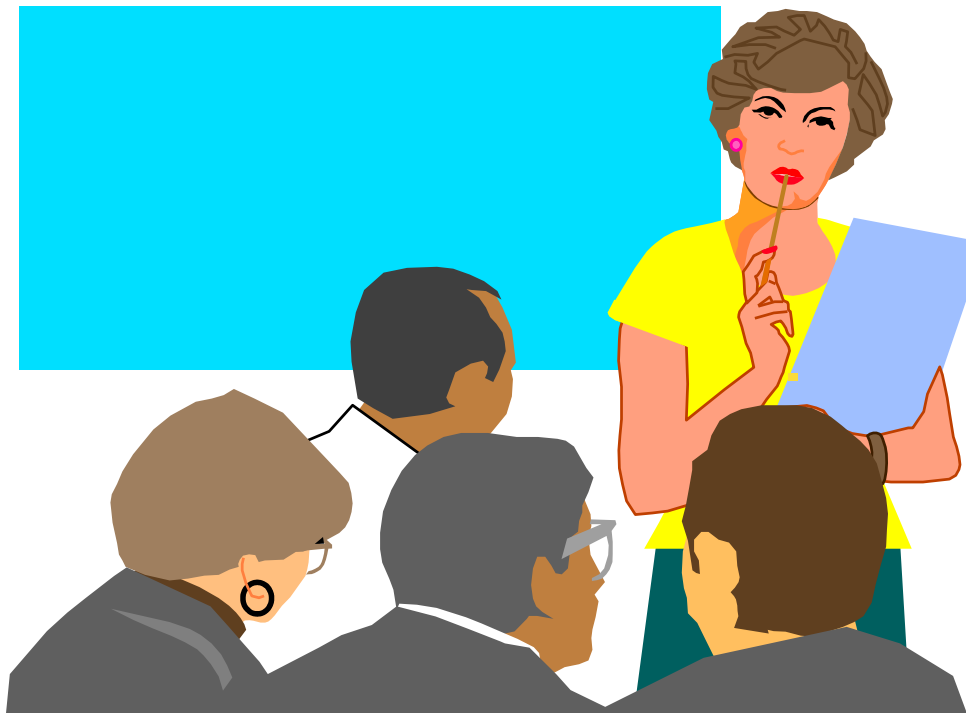
# Thought For The Day



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**“The best audience is intelligent,  
well-educated, and a little drunk.”**



**Alben W. Barkley, Vice President, 1949 - 1952**



# New AWC Motto



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# **We've Upped Our Standards**

# **Up Yours!**



# How This Developed



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- **These are some of my techniques for coping with the demands of academia**
- **They are not the only ways and may not be the best ways for you**
- **But you need to find and practice ways of becoming academically efficient . . .and effective.**



# This Is Important!



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- **Start now and practice a system so it becomes automatic**
- **Want you to be effective in your thinking and the communication of your ideas**
- **Poorly communicated ideas are often taken as poor ideas**
- **We can't afford either**



# Educational General Order #1

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- **Always carry something to write on and something to write with**
- **Electronic or old fashioned is less important than taking notes**
- **Ideas may come at strange times and places and you need to capture them**
- **Write it down!**



# Getting Started



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- **You are all capable people or you wouldn't be here**
- **But you've been out of a school environment for a long time**
- **These are short cuts and tricks of the trade to cope efficiently with reading, writing and studying**
- **Rule #1--Always begin with a question**



# The Importance Of Questions

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- **You can't find an answer without a question**
- **All data is equal until you discriminate among it by asking a question**
- **Training = how—answers**
- **Education = why—questions**
- **Questions are the key to learning**





# The Importance Of Questions

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- **Question everything, every reading, every one**
- **Questions help you to define and refine purpose and mission**
- **You can't learn to ask good questions unless you practice the skill and art of doing so**
- **Questions precede answers!**



# Leadership And Questions

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- **You have spent much of your career providing answers for other people's questions**
- **As a senior leader, you have a greater responsibility for questions**
- **If you don't ensure that the right questions are asked, the nation may not get the answers it needs**



# How To Formulate Questions



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- **Which level is most important?**
- **Informational**
  - **Who**
  - **Where**
  - **When**
  - **What**
- **Analytical**
  - **How**
  - **Why**
- **Prioritize within each category**
- **Focus on most important elements**



# How To Formulate Questions



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- **Then explore**
  - **A. Connections**
  - **B. Precedents**
  - **C. Implications**
  - **D. Causation**
- **Don't accept single factor analysis**
- **Make a case for the alternative**
  - **Stand things on their head**
  - **Reverse cause and effect**



# Learning to Ask Good Questions

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- **On a 3x5 card, ask three questions for each seminar IP (instructional period)**
- **These can be questions you asked of the readings before you read the material**
- **They can be questions raised by the assignment**
- **They can be questions about differing perspectives in the readings**
- **They can be things not addressed in the IP but related to it**



# Learning to Ask Good Questions

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- **Think about different types of questions and their utility**
- **Practice asking different kinds of questions**
- **Jot down what others ask and the questions you think were the best ones asked**
- **Get to the heart of the matter—the essential question on which all others depend**
- **Try and answer your questions and test the range of responses that are possible**



# Basic Kinds of Questions



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- **Memory Level Questions—**
  - Deal with information and basic facts
  - Involve naming, identifying, defining, designating
  - Who, What Where, When?
- **Evaluative Questions—**
  - Deal with matters of judgment, value and choice
  - Involve valuing, judging, defending, justifying
  - What do you think about ... ?



# Basic Kinds of Questions



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- **Convergent Questions—**
  - Represent analysis and integration of information
  - Involve explaining, stating relationships, comparing and contrasting
  - Ask how, why, in what ways ...?
- **Divergent thinking—**
  - Generation of new ideas, perspectives, direction
  - Involve predicting, hypothesizing, inferring, reconstructing
  - Imagine; suppose; how might ...; if..., then...





# Other Kinds of Questions



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- **Essential    Elaborating**
- **Irreverent Irrelevant**
- **Hypothetical    Unanswerable**
- **Provocative    Strategic**
- **Telling Probing**
- **Inventive Planning**
- **Why bother?    So what?**



# Asking “Why?”



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- **Always ask “why?”**
- **Become a four year old**
- **Taichi Ohno--ask “why?” five times**
  - **Form the habit of skepticism**
  - **Achieve a different level of understanding**
  - **Make significant breakthroughs**
- **Answers to the question include**
  - **Because**
  - **Why not?**



# Rules 2-5 for Study and Research

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- **2. Never write on two sides of a note card or piece of paper**
- **3. Always THINK about the answers to your questions before you go looking for them**
- **4. Write it down! Your stray thoughts and insights may be the most important elements.**
- **5. Keep your thoughts, papers and references organized, for each distinct project--if only in the same file, pile or corner of the room!**



# How To Preview A Book



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**Know what you have to confront**

**Title**

**Author**

**Publisher**

**Date of publication**

**Subtitle**

**What spin, point of view?**



# How To Preview A Book

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- **What is the purpose of reading book?**
- **Am I to be tested on it (how)?**
- **What do I need to get out of it?**
  - **(How much should I put into it?)**
  - **Facts / theories / methods / other**



# How To Preview A Book



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- **Use book's organization to help you read**
- **Table of contents**
  - **Chapter titles - a road map**
- **Exec. Summary, preface, introduction**
  - **Why book written**
  - **How book organized**
- **Index**
  - **What does author spend time on**
  - **Where find particular info**



# How To Preview A Book

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- **Basic review should answer:**
  - **What is book about**
  - **How is it presented**
- **Main idea, theme of work**
- **Why is it important to me?**
- **Why is it important to the assignment?**



# How To Read A Book



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- **What is the question?**
- **Read the introduction and conclusion**
- **Skim material to be read looking for:**
  - **Chapter subdivisions**
  - **Bold face, *italics*, underlining**
  - **Lists, numbers**
  - **Summaries, conclusions**





# How To Read A Book



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- **Read with a purpose**
- **Preview first**
- **Identify the logic**
- **Read differentially'**
- **Annotate as you read**
- **Pay attention to what confuses you**
- **Notice relation to other scholarship**
- **Write notes about it**
- **Reflect on and evaluate the argument**



# How To Read A Book

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- **Learn how author writes**
- **Know where to look**
- **Practice to increase skills and ability**
  - **Best for social sciences, not literature**
- **Vary your reading speed**
- **Note how you react to your reading**
  - **Connect to material**
  - **Make presentation easier**



# How To Read A Book

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- **Make negative case against the author's arguments and evidence**
- **You'll understand better if you:**
  - **Argue the opposite point of view**
  - **Find weaknesses and advantages in arguments**
- **Focus, don't forget purpose**



# **“Only Connect”**



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- **How are things alike?**
- **How are they different?**
- **Precedents?**
- **Analogies?**
- **Consequences?**
- **Limitations?**
- **What if...?**
- **Why not?**
- **How best...?**
- **Alternatives?**
- **. . . ?**



# Observation



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**“Much learning doth  
make thee mad”**

**ACTS,**

**XXVI, 24**



# How To Study



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- **Know what you are to accomplish**
  - **What are main questions, tasks?**
- **Organize to do it -- focus!**
- **Plan time**
  - **Work in 30, 60 or 90 minute segments**
    - **Gradually lengthen time to 3 hours**



# How To Study

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- **Plan your course of study**
  - **Beginning, middle , end**
  - **Preview -- checkpoints**
  - **Practice different paces**
  - **Review what you have done**
  - **Is this accomplishing the task?**
- **Take breaks -- reward yourself**



# Systems For Notes



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- **SYMBOL SETS:**

- **USE**  **FOR MAIN ARGUMENTS**

- **USE**  **FOR SUB-POINTS**

- **USE**  **FOR BOX FACTS** 

- **USE**  **FOR KEY TERMS, IDEAS**





# Systems For Notes



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**KEY CONCEPTS  
ARGUMENTS**

**MAJOR**

**DEFINITIONS**

**EVIDENCE**

**ASSUMPTIONS**

**SUMMARY**

**METHODOLOGY**

**CONCLUSIONS**



# Systems For Notes

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**Take notes as reminders**

**Take notes on notes for essence**

**Look for linkage, connections**

**Focus on what you *don't* know**

**Use all time available for efficiency**

**Waiting for spouse or kids, driving to AWC, etc.**

**What questions remain after reading?**

**After studying?**

**Answer them!!**



# Using Notes For Tests

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**Study with others after preparing yourself**

**Focus on what you don't know--not what you do know**

**Leave time to unwind before test**



# How To Take A Test (Essay)



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- **Read entire test and instructions - - 3 times**
- **Think!**
- **Define question**
- **State why it is important**
- **Tell reader what you will do, and how you will do it**



# How To Take A Test (Essay)

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- **Organize answers into components**
  - Outline response (argument, points)
  - List evidence (rule of three)
- **Plan time, establish checkpoints**
- **Accomplish mission -- execute!**
- **End = 2 sentence summary and conclusion**
- **Check -- do beginning and end match?**



# How To Take A Test (Essay)

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**Don't panic if you learn  
something on the exam ---**

**Say so !**

**Show what you learned in taking  
exam**



# How To Do Research And Write A Paper



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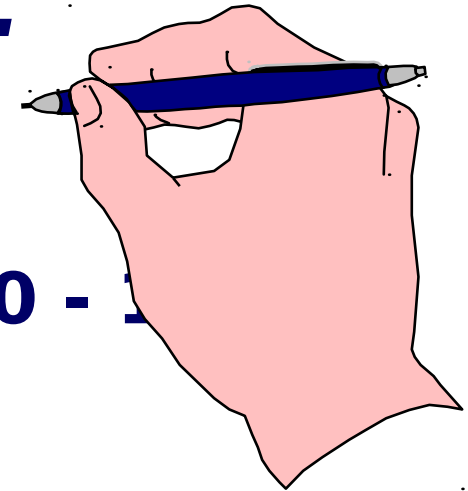


- **What you like least**
- **The military tends to be an oral culture**
- **Power Point presents the outline**
- **Often doesn't provide the logic that underlies the selected data**
- **Writing is required because it makes you THINK and defend your views in detail**
- **It is an instrumental goal**
- **What you learn in the process of doing it is as important as the final product**



***“Writing is easy. All you do is stare at a blank sheet of paper until drops of blood form on your forehead.”***

**Gene Fowler (1890 - 1958)**







# Research



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- **Asking good questions**
- **Focusing on a particular problem**
- **Formulating an hypothesis**
- **Leads to a thesis**
- **Finding the facts**
- **THINKING about all of this**
- **Analyzing the components**
- **Synthesizing a new interpretation**



# Research and Plagiarism



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- “If you take from one person, it is plagiarism, if you take from many, it is research!”
- **WRONG!**
- **Plagiarism is using the words or ideas of another as if they are your own, without proper citation**
- **DON'T DO IT!**
- **Learn to paraphrase, don't cite every sentence**



# Plagiarism



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- **Using words, ideas, data of another without citation--on an exam, a paper, any assignment--is lying, stealing and cheating**
- **It is a violation of the UCMJ and conduct unbecoming an officer**
- **It is grounds for dismissal**
- **If you have any doubts, ask your course instructor**



# How To Write A Paper

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- **List all issues, points**
- **Cluster and arrange in logical order**
- **Get bibliography**
- **Begin research**
- **List main questions**
- **Read to answer these**
- **Take notes on your reactions**



# How To Write A Paper

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**Tell a STORY**  
**In order to**  
**Make a POINT**  
**That will**  
**Produce an OUTCOME**



# How To Write A Paper

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**The story is your argument or thesis**

**The point to be made is the purpose of the amassing of evidence**

**The outcome is the conclusions or recommendations**



# What You Want to Avoid



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**“Your manuscript is both good and original; but the part that is good is not original, and the part that is original is not good.”**

**Samuel Johnson**



# How To Write A Paper

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- **Write -- beginning , middle or end**
- **State conclusions**
- **Marshall evidence**
- **Finish all the way through**
- **Let it sit for a few days**
- **Revise and polish**
- **Fine art of writing is rewriting**





# How To Write A Paper

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- **Read it aloud**
- **Intelligent layman test**
- **Let your spouse review it**
- **Revise and rewrite**
- **Turn it in**
- **Move on**



# PARTING SHOT



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**“Unprovided with original learning,  
uninformed in the habits of  
thinking, unskilled in the arts of  
composition, I resolved to  
write a book.”**

**Edward Gibbon, author  
*Decline and Fall of the Roman  
Empire***



# So What?--Why Is AWC Important?

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**War is first**

- **Sought or avoided**
- **Planned and fought**
- **Won or lost**

**In the minds of human beings**



# **So What?--Why Is AWC Important?**

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**“Terrain doesn’t fight wars.  
Machines don’t fight war. People  
fight wars. It’s in the minds of  
men that war must be fought.”**

**USAF Col John Boyd**



# Remember . . .



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- **Learning to think quickly & well is more important than being taught what to think**
- **Your mind is a force multiplier and your best weapon**
- **How you think and how well you perform because of that makes all the difference**



# THE BOTTOM LINE



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- **Imagine the us fighting WW II without**
  - **Carrier aviation**
  - **Amphibious landings**
  - **Strategic bombing**
  - **Combined arms**
- **All were developed in the 1920s and 1930s**
- **What happens in war is often the result of peacetime military thinking and preparedness**



# **You Will Be Called Upon Again To Defend The Nation**

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- **How well you will accomplish this future mission will, in part, be dependent on how well you have learned to think about issues studied at the AWC**
- **This is your duty assignment**
- **It is a vital part of preparedness to provide for the common defense**



# Parting Shots



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- **“We thought we had the answers—It was the questions we had wrong.”  
U2**
- **“Questions and questioning may be the most powerful technology of all.”  
Jamie McKenzie, *Beyond Technology***
- **Remember--some questions are better than others—rank times IQ is a constant.**



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